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IS 2578 (1978): Squash Racket Frames [PCD 22: Sports Goods]



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“Knowledge is such a treasure which cannot be stolen”

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IS : 2578 - 1978

Indian Standard
SPECIFICATION FOR
SQUASH RACKET FRAMES
(*First Revision*)

UDC 685.634.24 : 796.346



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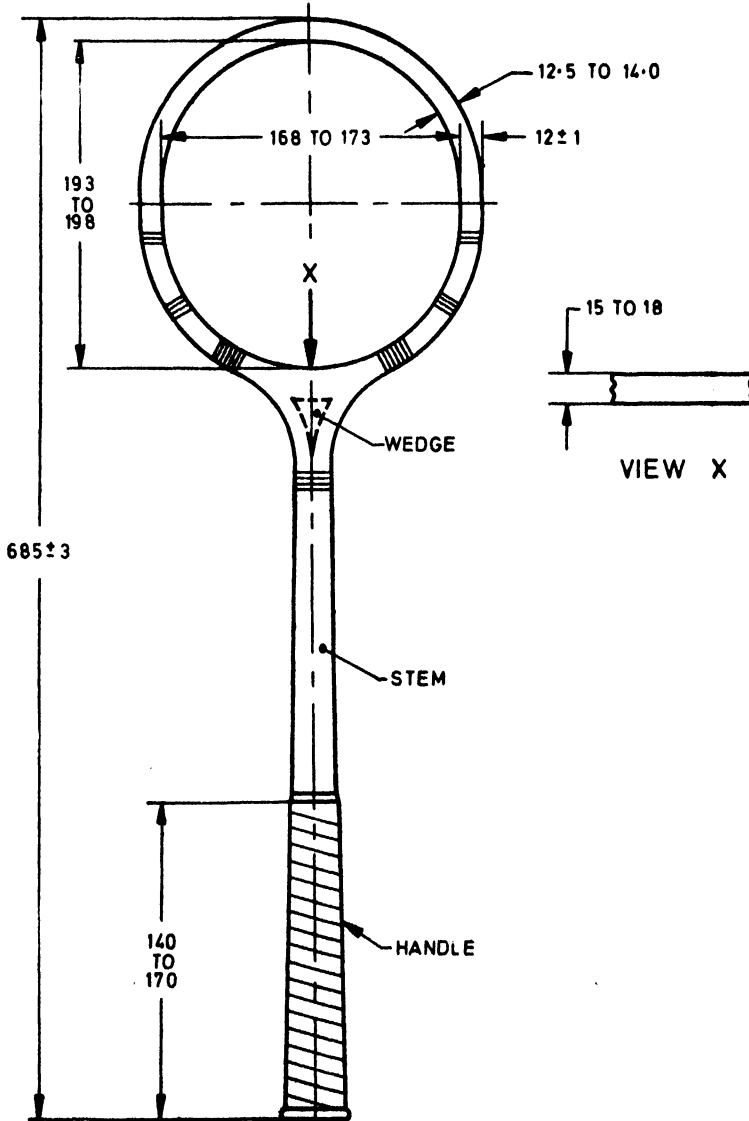
June 1979



AMENDMENT NO. 1 AUGUST 1984
TO
IS : 2578 -1978 SPECIFICATION FOR
SQUASH RACKET FRAMES
(First Revision)

Alteration

(Page 6, Fig. 1) — Substitute the following for the existing Fig. 1:



All dimensions in millimetres.
FIG. 1 SQUASH RACKET FRAME

Indian Standard

SPECIFICATION FOR SQUASH RACKET FRAMES

(First Revision)

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(Continued on page 2)

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(Continued from page 1)

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Indian Standard
SPECIFICATION FOR
SQUASH RACKET FRAMES
(*First Revision*)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 27 November 1978, after the draft finalized by the Sports Goods Sectional Committee had been approved by the Consumer Products and Medical Instruments Division Council.

0.2 This standard was first published in 1963 and is being revised to incorporate the suggestions received from time to time.

0.3 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard covers the requirements for two grades of squash racket frames designated as ' Grade 1 ' and ' Grade 2 '.

2. GRADES

2.1 Squash racket frames shall be classified into two grades, namely, Grade 1 and Grade 2 according to the following requirements.

2.1.1 Grade 1 — The frame shall be of five to seven-ply laminated construction with reinforced shoulders minimum 3 ash ply.

2.1.2 Grade 2 — The frame shall be of five to seven-ply laminated construction with reinforced shoulders.

*Rules for rounding off numerical values (*revised*).

3. MATERIAL

3.1 The timber shall be straight-grained and free from knots, cracks, open splits, decay and stain. It shall be well-seasoned with moisture content within the range of 9 to 12 percent (*see* IS : 287-1973*).

3.1.1 Bend — The bend shall be laminated with two-ply each of ash (*Fraxinus* sp) and beech (*Fagus* sp) for Grade 1 of frame, and with minimum three-ply of ash (*Fraxinus* sp) and beech (*Fagus* sp) for Grade 2 of frame; and any one of the following combinations of timbers:

- a) beech (*Fagus* sp) and birch (*Betula* sp),
- b) walnut (*Juglans* sp) and fibre,
- c) hickory (*Carva* sp), and
- d) maple (*Acer* sp).

3.1.2 Handle

3.1.2.1 For Grade 1 the handle shall be made from suitably chamfered willow (*Salix alba* var *Coerulea*), lime (*Citrus* sp) or toon (*Cedrela toona* Roxb.).

3.1.2.2 For Grade 2 the handle shall be made from toon (*Cedrela toona* Roxb.) or poplar (*Populus* sp), suitably chamfered.

3.1.3 Wedge

3.1.3.1 For Grade 1 the wedge shall be made of ash (*Fraxinus* sp), beech (*Fagus* sp) or sycamore (*Acer Pseudo Platanus*).

3.1.3.2 For Grade 2 the wedge shall be made of ash (*Fraxinus* sp) or beech (*Fagus* sp).

3.2 Grip — The grip shall be made of leather, leather cloth, or towel, as may be specified by the purchaser.

4. CONSTRUCTIONAL REQUIREMENTS

4.1 All plies shall be properly glued with synthetic resin adhesive (*see* IS : 851-1957†) and securely fitted to make a proper bend.

4.2 Wedges shall be glued and adjusted at the throat of the bends.

4.3 The pieces of the handle shall be properly glued and strongly pressed.

4.4 The shoulders shall be reinforced with U-shaped face-plates by the help of glue, the veneer being of ash, beech or brimji (*Celtis australis* Linn.).

*Recommendations for maximum permissible moisture content of timber used for different purposes.

†Specification for synthetic resin adhesives for construction work in wood.

4.5 The surfaces of the bend and throat shall be smoothly rounded or bevelled. The edges of the holes on the bend for the gut shall be smoothly rounded off.

4.6 The frames shall be finely sand-papered, polished with cellulose lacquer and trimmed attractively.

4.7 The handle shall be either rounded or semi-rounded and covered with grooved grips of leather, leather cloth, rubber or towel.

4.8 The dimensions of the frame shall be as indicated in Fig. 1.

4.9 Holes — The number of holes shall be 54 to 56. The diameter of each hole shall be 2.0 ± 0.2 mm.

5. SAMPLING AND CRITERIA FOR CONFORMITY

5.1 The sampling scheme and criteria for acceptance for squash racket frames shall be agreed to between the purchaser and the supplier. A suitable sampling scheme and criteria for acceptance are given in Appendix A.

6. DESIGNATION

6.1 The designation of a squash racket shall indicate:

- a) grade, and
- b) IS number.

Example:

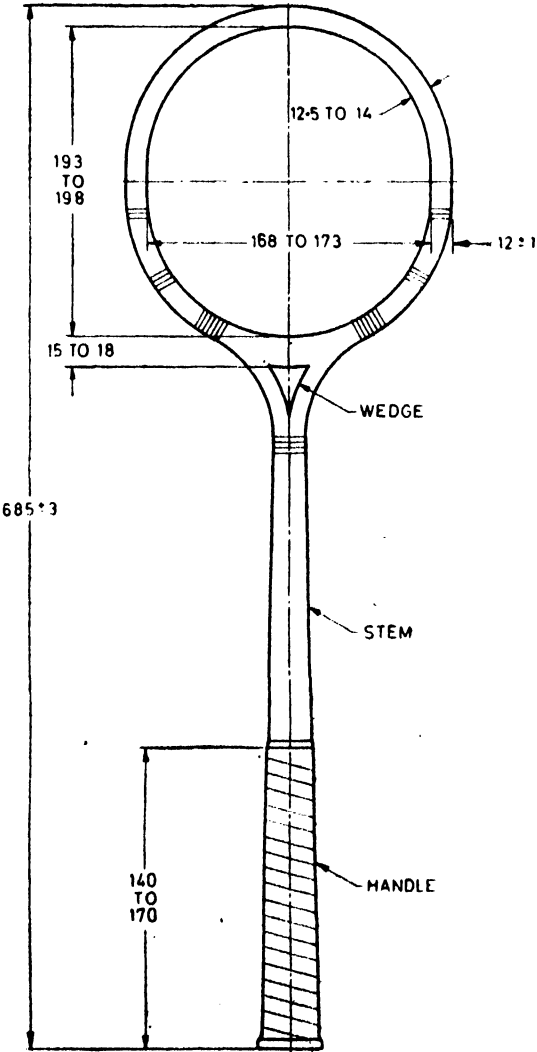
Grade 1 of squash racket shall be designated as:
Squash racket, Grade I, IS : 2578

7. MARKING AND PACKING

7.1 Unless otherwise required by the purchaser, each squash racket shall be marked on the throat and handle of the frame with the manufacturer's or supplier's initials or trade-mark.

7.1.1 The squash racket frames may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.



All dimensions in millimetres.

FIG. 1 SQUASH RACKET FRAME

7.2 Rackets shall be packed in weather-proof material in accordance with the best prevalent trade practice.

APPENDIX A

(Clause 5.1)

SAMPLING AND CRITERIA FOR CONFORMITY

A-1. SAMPLING

A-1.1 Lot — In any consignment, all the rackets of one grade manufactured by the same firm shall be grouped together to constitute a lot.

A-1.2 Samples for test shall be selected at random from each lot in accordance with col 1 and 2 of Table 1.

TABLE 1 SIZE OF THE SAMPLE AND CRITERION FOR CONFORMITY

NO. OF RACKETS IN THE LOT	NO. OF RACKETS IN THE SAMPLE	PERMISSIBLE NUMBER OF DEFECTIVE RACKETS IN THE SAMPLE
(1)	(2)	(3)
Up to 5	All	0
6 „ 25	5	0
26 „ 50	8	0
51 „ 100	13	1
101 „ 150	20	2
151 „ 300	32	3
301 and above	50	5

A-2. INSPECTION AND CRITERIA FOR ACCEPTANCE

A-2.1 Each racket in the test samples shall first be examined for materials used in the construction as given in 3. If any racket in the test samples is noticed to have been made up of materials other than those specified, all the rackets in the lot shall be examined and those non-conforming shall be rejected.

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A-2.1.1 All the rackets in the lot which conform to the requirements of material shall constitute a fresh lot which shall be sampled afresh in accordance with col 1 and 2 of Table 1 for the purpose of testing in A-2.2.

A-2.2 If the rackets are made up of the specified materials, then each racket of the test samples shall be tested for the dimensional and constructional requirements as given under 4.

A-2.3 During testing as in A-2.2, the sample racket failing to satisfy any one or more of the requirements of 4.1 to 4.9 shall be deemed as defective.

A-2.4 The lot shall be declared as conforming to this standard if the number of defective rackets in the sample does not exceed the number given in col 3 of Table 1.

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